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U.S. DEPARTMENT OF THE INTERIOR
Bureau of Land Management

Lakeview District Office
1000 S. 9th.
P.O. Box 151
Lakeview, Oregon 97630

⑥

December 1993

②

Warner Lakes Proposed Plan Amendment for Juniper Management on Selected Areas of the Lakeview Resource Area

③

Plan Amendment and Environmental Assessment for the Warner Lakes Management Framework Plan

E.A. Number OR-010-02-19

RPP
2-22-94

Pub-94-017305
REQ 94-013739

As the Nation's principal conservation agency, the Department of the Interior has responsibility for most of our nationally owned public lands and natural resources. This includes fostering the wisest use of our land and water resources, protecting our fish and wildlife, preserving the environmental and cultural values of our national parks and historical places, and providing for the enjoyment of life through outdoor recreation. The Department assesses our energy and mineral resources and works to assure that their development is in the best interest of all our people. The Department also has a major responsibility for American Indian reservation communities and for people who live in Island Territories under U.S. administration.

BLM/OR/WA/PL-94/2+1792

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United States Department of the Interior

TAKE PRIDE IN AMERICA

BUREAU OF LAND MANAGEMENT
Lakeview District Office
P.O. Box 151 (1000 Ninth Street S.)
Lakeview, Oregon 97630

IN REPLY REFER TO

December 29, 1993

Dear Concerned Citizen:

Enclosed for your review is the proposed Warner Lakes Management Framework Plan amendment and Environmental Assessment for juniper management. The planning area is a portion of the Lakeview Resource Area of the Lakeview District. The Bureau of Land Management has prepared this document to address proposed changes in the management of juniper and other associated resources. The enclosed environmental assessment addresses three alternatives for management of juniper in the plan amendment area.

The proposed Plan Amendment is based on the draft published in June, 1993; and upon which public comments were received until July 15,1993. Eight comment letters were received during this period from individuals, groups and governmental agencies. Public and agency comments were used to revise or clarify the intent and direction of the preferred alternative.

Differences between the draft and this proposed Plan Amendment are based on comments and recommendations received during the public comment period. There is little substantial difference between the draft and proposed Plan Amendments, any differences have been analyzed and this proposed Plan Amendment is designed to stand as an independent document without references to the draft. Additions made to the draft as a result of comments received are made in *italics* in this document. Proposed decisions in the Plan Amendment are based on the analysis contained in the Environmental Assessment, which considered additional data provided during review of the draft. The proposed Plan Amendment provides greater detail on the proposed juniper control activities. Approval of this Plan Amendment will be documented in a Decision Record which will be mailed to known interested parties and to the public.

If you wish to provide comments for further consideration on the proposed Plan Amendment, please write to the Lakeview Resource Area Manager, Scott R. Florence, P.O. Box 151, Lakeview, Oregon 97630.

The proposed Plan Amendment cannot be approved and implemented until the Governor of Oregon has had an opportunity to review it. Approval of the Plan Amendment will also be subject to the final action on any protests which may be filed. Only those persons or organizations who participated in the planning process leading to this proposed plan amendment may protest. If our records do not indicate you had any involvement in any stage in the preparation of the amendment, your protest will be dismissed without further review. A protest may raise only those issues which were submitted for the record during the planning process and should be filed with the Director (760), Bureau of Land Management, 1849 C Street, NW (406 L St.), Washington, D.C. 20240 within the official protest period ending on January 28, 1994. There is no provision for any extension of time. To be considered "timely," your protest must be postmarked no later than the last day of the protest period. Also, although not a requirement, we suggest you send your protest by certified mail, return receipt requested. Protests must contain the following information:

1. The name, mailing address, telephone number, and interest of the person filing the protest;

2. A statement of the issue or issues being protested:

3. A statement of the part or parts of the Plan Amendment being protested. To the extent possible, this should be done by reference to specific pages, paragraphs, sections, tables, maps, etc. included in the document;

4. A copy of all documents addressing the issue or issues that were submitted during the planning process by the protesting part, or an indication of the date that the issue or issues were discussed for the record;

5. A concise statement explaining why the proposed decision is believed to be incorrect. This is a critical part of your protest. Take care to document all relevant facts. As much as possible, reference or cite planning documents, environmental analyses, and available planning records. A protest which merely expresses disagreement with the proposed decision, without any data will not provide us with the benefit of your insight. In this case, the Director's review will be based on the existing analysis and supporting data.

Thank you for your continued participation in the land use planning process.

Sincerely,

June C Sundeen

June C. Sundeen
District Manager, Acting

Finding of No Significant Impact (FONSI)
for the Warner Lakes Plan Amendment for Juniper Management on Selected Areas of the Lakeview Resource Area

The Bureau of Land Management, Lakeview District, has analyzed various alternatives for managing juniper in selected areas of the Lakeview Resource Area. The alternatives and associated analysis are described in the attached Plan Amendment and Environmental Assessment made available for public review on June 1, 1993. This environmental assessment is hereby incorporated by reference and attached. The options for management direction identified in the attached EA would assure that no significant adverse impacts would occur to the human environment.

Under the preferred alternative in this proposed amendment to the Warner Lakes Management Framework Plan, significant impacts on the quality of the human environment would not occur based on the following considerations:

- Analysis indicated no significant impacts on society as a whole, the affected region, the affected interests or the locality.
- Public health or safety would not be significantly affected.
- The alternatives are not related to other actions with potential for cumulatively significant impacts to the important and relevant resource values for the areas involved.
- Cultural resources on, or eligible for the National Register of Historic Places would not be affected. Native American religious sites would not be affected.
- The alternatives would not significantly adversely affect endangered or threatened species or their habitat determined to be critical under the Endangered Species Act of 1973.
- The alternatives do not violate federal, state or local law requirements imposed for environmental protection. There are no known inconsistencies with officially approved or adopted federal, state or local natural resource related plans, policies or programs.
- Adverse impacts identified are minimal. Continued resource monitoring would ensure that no significant adverse impacts occur. As needed, appropriate management would be instituted to protect important natural and cultural resource values.
- The alternatives would not significantly alter other approved land use allocations or resource management direction in the existing Warner Lakes land use plans, except as noted in Chapter 1 of the attached EA.

FONSI Determination

On the basis of the information contained in this Environmental Assessment and all other information available to me as summarized above, it is my determination that none of the three alternatives constitute a major federal action significantly affecting the quality of the human environment (a finding of no significant action). Therefore, an environmental impact statement is unnecessary and will not be prepared. In addition, the amendments to the Warner Lakes Management Framework Plan do not substantially affect other resource programs to the extent that the district would initiate a Resource Management Plan/Environmental Impact Statement.

Scott R. Florence 11/30/93

Scott R. Florence, Manager
Lakeview Resource Area
Date

June C Sundeen 11/30/93

June C. Sundeen, District Manager, Acting
Date

State Director Approval:

I approve the proposed decisions in the preferred alternative in the proposed amendment to the Warner Lakes Management Framework Plan, as outlined in the attached Environmental Assessment and Finding of No Significant Impact. This document meets the requirement for agency decision making as provided in 40 CFR 1505.

Bibles 12-8-93

D. Dean Bibles, State Director, Oregon/Washington
Date

U.S. Department of Interior
Bureau of Land Management
Lakeview District Office
December 1993

Warner Lakes Proposed Plan Amendment for Juniper Management on Selected Areas of the Lakeview Resource Area

Plan Amendment and Environmental Assessment for the Warner Lakes Management Framework Plan

Scott R. Florence

Scott R. Florence, Manager
Lakeview Resource Area

June C Sundeen

June C. Sundeen, District Manager, Acting
Lakeview District Office

D. Dean Bibles, State Director,
Oregon/Washington State Office

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Chapter I Introduction

Land management guidance for the area covered by this amendment is provided by the Management Framework Plan (MFP) for the Warner Lakes Resource Area, approved in 1983. The 1983 plan made land use allocations and provided management direction in the Warner Lakes Resource Area. The existing guidance in the MFP does not accommodate or assess significant program changes addressed in this proposed plan amendment and environmental assessment. In 1987, the Warner Lakes Resource Area (RA) and the High Desert RA were combined to form the Lakeview RA. The plan amendment area is within the area covered by the old Warner Lakes MFP.

The following, listed by activity and number, is a summary of the MFP recommendations pertaining to juniper management:

> Forestry 3.1; provides for the disposal of timber products and other vegetative products from juniper woodlands to meet public demand for such products giving full consideration to other resource values.
>
> Watershed 1.4; recommended control of juniper on 2,466 acres to increase perennial grass cover. This recommendation was rejected by the Area Manager unless the control would be advantageous to mule deer and if it was not within view of Highway 140.

Wildlife 10.7; limited removal of timber from juniper woodlands to no cleared areas larger than 10 acres, a minimum of 300 feet between any two cleared blocks and no snags or decadent old trees to be removed.

Recreation 3.1; would not allow major vegetative alteration within one mile of Deep Creek Canyon, Camas Creek Canyon or Twentymile Creek Canyon to protect scenic quality. The Area Manager's decision would allow these projects if an in-depth environmental analysis was completed that analyzed the impacts to the scenic qualities of these sites.

Visual Resource Management (VRM) 1.1; prohibits vegetative alteration within Deep Creek Canyon.

VRM 1.2; restricts vegetative manipulation within 5 miles of all major travel routes and recreation sites to minimize visual impacts.

In general these MFP recommendations allow juniper management over most of the resource area to accomplish land management goals. However, currently the MFP District Manager's decision does not allow management of juniper within view of Highway 140, nor in Deep, Camas or Twentymile Creek Canyons.

At the time the MFP was prepared, it was felt that juniper was not a serious watershed concern and that it did not affect water yield or riparian condition.

Purpose and Need

The purpose and need for this document is to review potential changes in management in the Lakeview Resource Area. Potential actions addressed in this proposed amendment, not included in the original MFP, include management of juniper in the plan amendment area. Due to increasing juniper density, grass and forb density is decreasing exposing surface soils to diminished infiltration, increased overland flow and accelerated erosion. Many of the aspen stands in the plan amendment area are becoming decadent, spring flows are decreasing and watershed erosion is increasing because of the greater juniper density. It therefore becomes apparent that control of juniper in the plan amendment area is needed to restore functional watershed conditions and maximize response to management on the critical riparian zones.

This proposed Plan Amendment and associated Environmental Assessment is required by Bureau of Land Management (BLM) regulations and provides for public involvement and state and local government coordination. The plan amendment, when completed, will provide guidance for BLM management in the Area during the next 5 to 10 years or until a comprehensive Resource Management Plan is completed for the entire Lakeview Resource Area.

Western juniper, *Juniperus occidentalis*, has been a part of the Warner Valley watershed for at least the last 5000 years. It's range and density has fluctuated through the years based on climatic changes, within the 2000 to 4000 Before Present era, and more recently 400 to 200 years ago, having a density and range greater than that today (Mehringer, 1984). Since the early 1900's, juniper has expanded dramatically both in range and density (Shinn, 1977).

Juniper invasion in the last 100 years was caused by a combination of factors including improper livestock grazing and fire suppression. Poorly managed livestock grazing reduces herbaceous cover and ecologic condition allowing the juniper to compete more effectively within the vegetative community. Fire occurrence in the area historically was on a 25 to 50 year interval that tended to kill junipers before they could compete with more effective ground covers of grasses, forbs and shrubs. By removing the fine fuels that carry fire, grazing has also served to increase the length of fire intervals. Control of fire by settlers and later by government agencies has allowed juniper to expand its range and density further (Eddleman, 1991b)

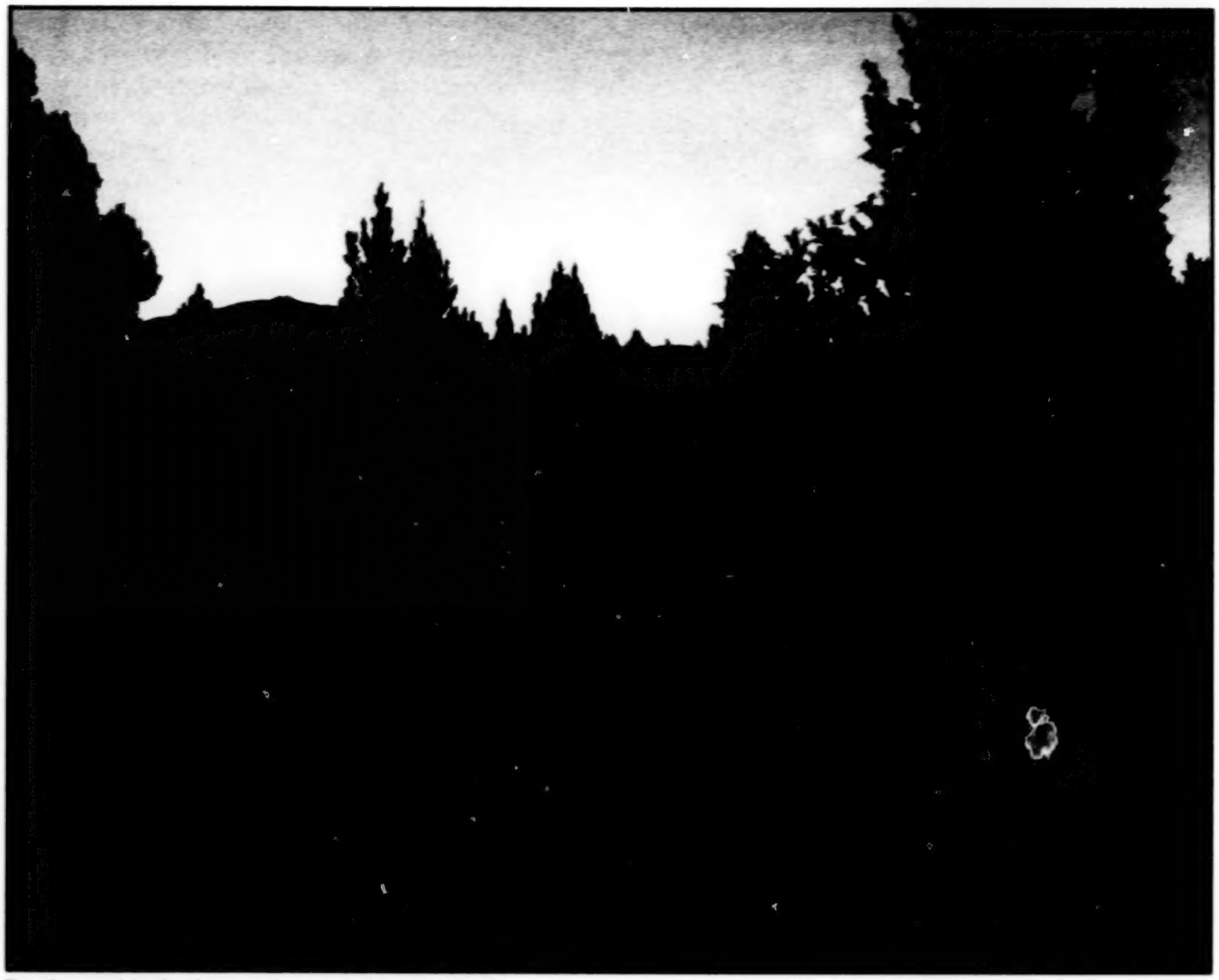
As juniper enters a site as seedlings, it has little effect. As the saplings over-top the surrounding vegetation it begins to effectively compete. On most sites, ground cover from vegetation decreases, speeding surface runoff and increasing erosion. Eddleman (1991b) reported that ground cover composed of 40 species of perennial forbs, grasses and shrubs was 12% on an area where juniper had been removed 7 years before, compared to 6% ground cover from 29 plant species on an adjacent site with 20% crown cover of juniper.

As juniper canopy cover increases, its effect on watersheds becomes more pronounced. In south central Oregon a juniper canopy cover of 35% can decrease effective precipitation by three inches through canopy interception alone. Use of soil moisture can be as high as 8.9 inches of equivalent precipitation in an October to September growth year. As few as 8 trees with a 12 inch base diameter per acre can use all precipitation input into an eastern Oregon system (Eddleman, 1991a).

When junipers become established around springs, aspen areas and riparian zones they consume available water. In a site with abundant water, as associated with a spring, a 12 inch diameter juniper can consume 30 gallons of water on a hot summer day (Bedell 1990). This water consumption can restrict and eliminate other vegetation on the site, such as aspen stands, or can eliminate or severely reduce spring flows.

Location

The Plan Amendment area contains about 13,000 acres and specifically addresses the BLM lands in view of Highway 140, Deep, Camas, Twelvemile and Twentymile Creek Canyons. The area lies approximately 15 miles east of Lakeview, Oregon, and south and west of Adel, Oregon. The Plan area includes 500 acres in Washoe County, Nevada and 10 acres



Erosion and lack of ground cover in juniper stand

in Modoc County, California along Twelvemile Creek that is managed by the Lakeview Resource Area. See Map 1.

Planning Process

This document presents resource management alternatives and analyzes associated environmental consequences as an amendment to the Warner Lakes MFP for the Lakeview District. The amendment has been prepared using the Bureau Planning System. Initial steps of the planning process included identification of issues and development of planning criteria. Issues were identified through public comments and focused on concerns and needs, as well as opportunities for resource use, development and protection. Planning criteria were based on BLM's policy and guidance, applicable laws, the result of public participation, interdisciplinary team input and coordination with other federal agencies, state and local governments.

Issues and planning criteria were identified in a scoping report and the public scoping process conducted during December 10, 1992 thru February 1, 1993. During this scoping period 17 letters were received.

Detailed information on the development of the plan amendment is available at the Lakeview District Office.

Conformance Statement

Except for the No Action Alternative, the alternatives analyzed in the Plan Amendment and Environmental

Assessment do not conform to the existing Warner Lakes MFP.

Planning Issues

Legal Guidelines

Administration of the Bureau of Land Management, Lakeview District, is guided primarily by the Federal Land Policy and Management Act of 1976 (FLPMA) (90 Stat. 2743 USC 1701).

The following are pertinent major provisions of FLPMA:

1. Under the principles of multiple use and sustained yield, BLM has broad management responsibility over Federal lands;
2. Comprehensive land use planning will be accomplished in order to properly utilize the lands and the resources they contain;
3. Management activities will strive to protect scientific, scenic, historical, ecological, environmental, air and atmosphere, water, and archaeological values.

In addition to this overall policy, State and Federal laws and policies also direct and constrain management of specific resources and activities in the amendment area. Other Bureau policy and guidance as directed by manual or instruction memorandum also applies.

Issues

Major issues identified through Bureau review and the public scoping process include:

1. How should the ecologically significant "ancient" juniper stands on public lands in the Plan Amendment Area be managed to meet botanical, wildlife and other resource objectives?

2. How should residual juniper stands and other vegetative types be managed to provide an *optimum ratio between forage and cover for* deer?

3. How should visual resource management objectives be modified to protect important viewsheds or travel corridors while meeting other resource objectives?

4. How should WSA (Wilderness Study Area) management objectives be considered when developing vegetation management objectives, including use of prescribed fire?

5. What should be done to improve or maintain watershed and fish habitat condition where such practices have allowed juniper encroachment into grass/forb communities?

6. What methods should be used to remove and dispose of juniper?

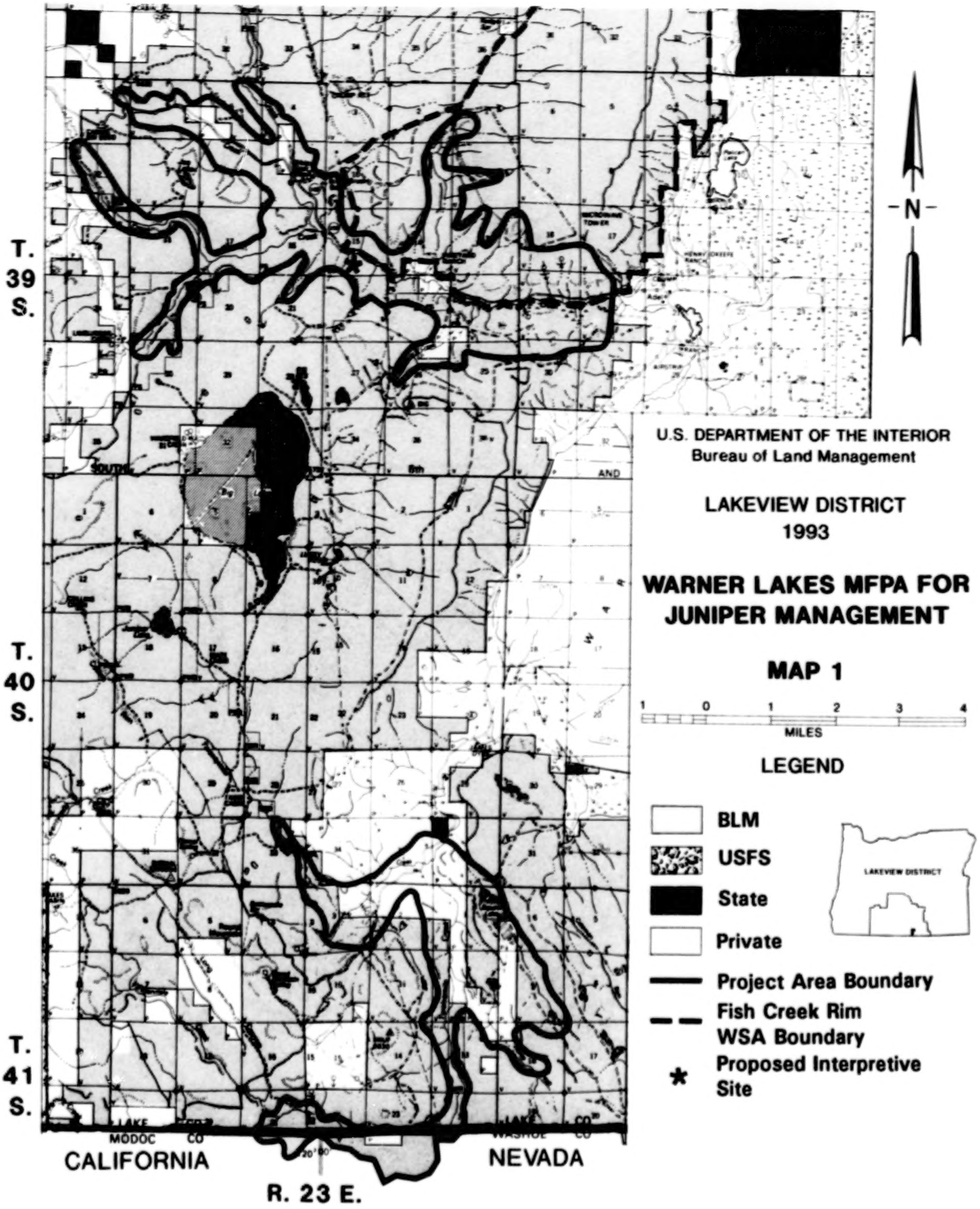
7. How will the area be managed in the future to prevent reinvasion of juniper?

Decision Making

The decision-making process considers legal guidelines, public concerns, present and potential uses of the public lands in the amendment area, long-term benefits to the public as opposed to short term benefits and State and local plans and goals.

Consequently, the final decision could accept any alternative as presented in the proposed plan, or a combination of the alternatives analyzed.

The decision package, when implemented, will provide specific uses and resource management objectives for each land-use allocation.



U.S. DEPARTMENT OF THE INTERIOR
Bureau of Land Management

LAKEVIEW DISTRICT
1993

WARNER LAKES MFPA FOR JUNIPER MANAGEMENT

MAP 1

LEGEND

- ☐ BLM
- ▨ USFS
- ■ State
- ☐ Private
- ━ Project Area Boundary
- ╍ Fish Creek Rim WSA Boundary
- * Proposed Interpretive Site

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Chapter 2 Proposed Alternatives

The following alternatives present a range of management opportunities within the amendment area. Alternative 1 (No Action) represents continuation of current management direction. Alternatives 2 and 3 permit some level of juniper control to meet specific land management objectives, while restricting juniper management on some areas.

Alternative No.1: No Action, Maintain Present Situation

Goal:

Continue to follow the existing MFP and Lakeview Grazing Environmental Impact Statement (EIS) direction for juniper, WSA and watershed management and visual resources.

Objectives:

1. Maintain restrictions on juniper management within the plan amendment area for visual resource concerns.
2. Maintain current wildlife habitat and watershed management opportunities within constraints of existing MFP decisions.

Alternative No. 2: Juniper management to meet watershed, wildlife, and riparian objectives excluding the Fish Creek Rim WSA.

Goal:

Manage juniper within the amendment area, excluding the Fish Creek Rim WSA, to improve watershed and riparian conditions, maximize wildlife habitat values, protect the visual resource and provide public education on benefits of the project.

Objectives:

1. Protect the visual resource and maintain or improve wildlife habitats and watershed and riparian conditions.
2. Perpetuate ancient juniper stands.
3. Make no intrusions into the WSA.

Ancient Juniper

4. Provide for public education

Brief Description of Alternative:

In the amendment area outside of the WSA, there is greater juniper cover on 12,463 acres than would be expected if the sites were in excellent condition. It is anticipated that up to 5,000 acres could eventually be cut after leaving juniper stands for wildlife cover and for retention of ancient juniper. Within the Lakeview District, there are an estimated 160,000 acres of juniper impacted sites. From a cumulative impact standpoint, the proposal to cut trees in this amendment area accounts for three per cent of the total juniper cover in the District. Over the last ten years, 523 acres, in eight projects, of juniper has been cut in the Resource Area. It is anticipated that an average of 250 acres of juniper, in several project sites, would be controlled per year in the amendment area, over the next 20 years. The highest priority for treatment of juniper in the amendment area will be around springs, in riparian areas and in aspen stands.

In order to maintain long term resource conditions in desired seral stages and to prevent the reoccurrence of juniper encroachment into the control areas, prescribed fire would be used periodically. This would be on an estimated 30 to 50 year cycle to manage the vegetation in the area. In some critical locations, fire may be used to reduce slash loads for fuels reduction and visual impacts. A prescribed fire plan, incorporating and considering prescribed natural fire, will be prepared in the future. Prescribed fire plans will consider guidance in the Oregon Department of Environmental Quality's State Implementation Plan (1986) for air quality, as it relates to eastern Oregon.

Prior to initiation of any work, botanical, cultural, and endangered, threatened and sensitive species clearances would be completed if required by the area botanist, archeologist or biologists. *The list of California Special Plant Elements will be considered and surveyed for prior to any juniper control work.* These specialists will make recommendations to avoid or mitigate impacts to these resources, and the Area Manager will specify implementation of these and other stipulations on project design. Wildlife, recreation, visual, livestock grazing and other resource concerns would be addressed and mitigated as necessary to meet requirements in this document.

The applicable state wildlife agency will be involved in project layout to assure protection of thermal and hiding cover. Project design features to protect cover will be mutually developed between the BLM and the state agency.

Means of control that minimizes ground disturbance, such as cutting with chainsaws or prescribed burning, would be preferred. Due to the nature of the plan amendment area, steep slopes and association with streams and riparian sites, mechanical control methods would be generally impractical. *Mechanical control in this document includes skidders and harvesters, it does not include chainsaws. Mechanical control methods will be allowed only on sites with less than 30% slopes, and where material removal would not require stream crossings. In addition, no operation of equipment will be allowed within 300 feet of the edge of any riparian zone. No new road construction will be allowed to facilitate removal of material. To assure ground cover after a project and to provide for increased soil nutrients, any juniper harvest project will remove only the main stem of the tree, leaving the branches scattered on the site. Given these restrictions, the use of equipment to remove juniper would be limited to a few sites above Parsnip Creek north of Highway 140, along the Ft. Bidwell road and above Squaw Lake. Yarding would be on designated skid trails using low ground pressure equipment. If marketable material can be removed with helicopters, the equipment restrictions for slope and stream crossings would not apply, however, the limbs would still remain on site and the 300 foot stream buffer restriction would be required.* Chemical means of control will not be addressed in this EA because of the current judicial restrictions placed on herbicide use, except for noxious species, and the lack of available materials to effectively control juniper. However, should restrictions on herbicide use be lifted, and an effective juniper herbicide become available, its use will be considered. Should herbicide use be proposed, a separate EA would be prepared to assess potential impacts *unless addressed in an applicable RMP/EIS or programmable EIS.*

Cutting is preferred to prescribed fire for the initial control of juniper. Cutting allows recovery of herbaceous vegetation while still protecting soils from erosion. Cutting also allows incorporation of litter and nitrogen in the soil.

Using firewood, post and pole sales as a method to control juniper would be considered on a site specific basis, but again, use of this method would be restricted for the same reasons *and using the same guidelines under mechanical methods.* It is estimated that no more than an average of 20 acres of juniper per year, over the next 20 years, would be controlled using material sales in the amendment area.

On sites with little or no herbaceous ground cover, seeds from plants native to that site would be broadcast seeded prior to falling the juniper. The action of falling juniper and the activity of the workers in the stands helps incorporate the seeds into the ground. The fallen juniper provides a micro-climate that facilitates the establishment of the seedlings and it protects the seedlings from disturbance. Local experience has shown a good response to the establishment of seedlings using this method.

Prior to juniper cutting, trees to be retained to meet wildlife cover and ancient juniper objectives will be clearly marked.

Ancient juniper will be managed under the following guidelines. Generally, less than 2% of the trees over 150 years old in the amendment area would be cut. Those trees greater than 150 years old that may be cut on a very limited basis would occur in the immediate vicinity of springs and aspen stands. Some older trees may be cut to determine the age of the trees in a stand, if an adequate core cannot be obtained. Stands of old trees will not be entered at all, leaving younger trees to replace the old trees as they die. In areas outside of old-growth stands, at least one middle aged tree (75 to 100 years old) will be left for each older tree left.

A road side interpretive display that describes the benefits of and reasons for the juniper management project is proposed. *The site will be located next to Highway 140 on an existing wide shoulder. Less than 5,000 square feet of new disturbance will be required to develop this site.*

At a minimum, each project site will be monitored with pre and post treatment photo stations and flows from affected springs will be monitored prior to and after treatment. To maintain control areas, some project areas will have representative areas left uncut to allow comparison between treated and untreated sites. These control sites may serve as thermal or hiding cover for deer.

If the portion of the Fish Creek Rim WSA in the plan amendment area is dropped from future consideration as wilderness, juniper management on these lands will be as directed for the rest of the amendment area.

Alternative No. 3: Proposed Plan

Goal:

Manage juniper within the amendment area to improve watershed and riparian conditions, improve wildlife habitat values and protect the visual resource within the amendment area.

Objectives:

1. Protect the visual resource and maintain or improve wildlife habitats and watershed and riparian conditions.
2. Perpetuate ancient juniper stands.
3. Provide for public education.
4. Manage for native vegetation in the WSA.

Brief Description of Alternative:

This alternative is the same as Alternative 2, with the addition of juniper control in the Fish Creek Rim WSA. The WSA adds 2,290 acres of additional juniper cover, including approximately 1,300 acres that could be controlled. No machines, including chainsaws, or herbicides, would be used in the WSA to control juniper. Prescribed fire would be the *only* method of *juniper* control *allowed* in the WSA. All access in the WSA would be by existing roads. No materials sales would be used to control juniper in the WSA.

If all or part of the WSA is designated as Wilderness, juniper management in that portion of the amendment area would be as directed in the proposed action. Management in a designated Wilderness will serve to improve wilderness values. If all or part of the WSA is released from further study, juniper management in that portion of the amendment area would be the same as the rest of the amendment area.

Chapter 3 Affected Environment

The environment of the amendment area is characterized by broad fluctuations in temperature and precipitation. Seasonal temperatures range from 100 degrees Fahrenheit to 40 degrees below zero. Annual precipitation can vary from 6 to 20 inches, with the majority received in the form of snow in the late fall, winter and early spring.

Vegetation

Community descriptions are based on the ESI (Ecological Site Inventory) data conducted in the area from 1986-88. The following table lists the vegetation communities and acreage of each within the plan amendment area.

Table I. Potential Vegetation Communities

Vegetation Community	Acres
Mountain big sagebrush, bitterbrush, bluebunch wheatgrass	4,066
Mountain big sagebrush, Idaho fescue	3,951
Bitterbrush, Wyoming big sagebrush, bluebunch wheatgrass	1,366
Low sagebrush, Sandberg's bluegrass	1,330
Mountain big sagebrush, bitterbrush, Idaho fescue	460
Low sagebrush, Idaho fescue, bluebunch wheatgrass	256
Wyoming big sagebrush, bluebunch wheatgrass, Thurber's needlegrass	100
Basin big sagebrush, needle-and-thread grass	99
Nevada bluegrass, Great Basin wildrye, silver sagebrush	66
Slendar wheatgrass, Leiberg bluegrass, Nevada bluegrass	30
Tufted hairgrass, sedge	25
Rockland	1,465
Vegetation community data not available	100

Current vegetative community condition is based on ecological status. This condition is a function of the existing plant composition (seral stage) compared to the potential natural community of the site (Climax). Within the amendment area 190 acres are at potential natural community (excellent) condition, 3,183 acres are in late seral (Good) condition, 8,561 acres are in mid seral (Fair) condition, 805 acres are in early seral (Poor) condition. No condition data is available on 465 acres.

There are currently no known special status plant populations within the plan amendment area, but most of the area has not had a botanical survey conducted.

Invasive juniper, those junipers established in an area with densities greater than would normally occur, are the target of this amendment. Ancient juniper occur near the rim tops and rock outcrops where it was traditionally protected from fire. For the purposes of this amendment ancient juniper will be identified using the definition in Winward (1980), "as large trees with rounded crowns, and restricted density in a contiguous distribution pattern." Comments received from groups and individuals during the scoping process suggest a 150 year timeframe.

Based on ESI data, the difference between existing percent juniper cover compared to that at site potential follows:

No juniper present,	386 acres
0 - 2% difference,	3,036 acres
3 - 5% difference,	2,615 acres
6 - 8% difference,	1,227 acres
> 9% difference,	5,585 acres
No data	465 acres

On some sites existing juniper cover is as much as 40 percent greater than it should be at site potential. Photos of the Sweeney Canyon area from the 1930's show lower density and cover from juniper than occurs today.

The proposed interpretive site has sparse vegetative cover now, and it has been disturbed from past road building activity.

Wildlife Habitat

The amendment area is winter range for the Deep Creek deer herd, supplying a portion of the winter habitat for 500 head in the area. Some habitat is provided for yearlong residents as well.

Bighorn sheep and elk use the area to a limited extent, but their numbers are increasing in the area.

About 80 per cent of the species of birds and mammals in the area are dependant on riparian habitat proportionately more than any other habitat type (Elmore 1987).

Stream Conditions and Fish Habitat

The amendment area contains 19.2 miles of perennial stream and 8.3 miles of intermittent stream in the Deep Creek drainage. There are 16.5 miles of perennial stream in the Twentymile Creek drainage. Of the total 35.7 miles of stream habitat, 10.9 miles are in private ownership.

Average yearly stream discharge, minimum and maximum flows are shown in the Table II based on information from state operated gauging stations. Data is averaged from 10 years of records.

The perennial streams within the plan amendment area and in the Deep Creek drainage include: Parsnip, Drake, Camas and Deep. In the Twentymile drainage the perennial streams affected include Twelvemile, Twentymile and Fifteenmile. Three streams in the area flow intermittently; Horse Creek in the Twentymile Creek drainage, and the streams in

Table II. 10 Year Average Stream Flows

Gauge	Maximum Flow (cfs)	Minimum Flow (cfs)	Average Discharge (af)
Deep	2,138	8.7	116,000
Drake	1,100	1.1	6,000
Twentymile	1,668	0.5	46,000

Sweeney and Gibson Canyons along Deep Creek. Evidence suggests that these streams ran longer into the year than they do currently. Sweeney Canyon used to run as a perennial stream according to a long-time nearby resident (Earl Rogers, personal communication).

Each spring the Oregon Department of Fish and Wildlife releases hatchery raised rainbow trout into lower Deep Creek near the stream gauge to meet the recreational fishing demand. There is no information available on the number of fish per mile, either native or planted trout, in the streams covered by the plan amendment. William Kittredge (1987) wrote of catching numerous large trout from Deep Creek in the 1960's. Boyd Clagget (personal communication), retired ODF&W biologist, reported the need to increase the size of the bypass tube in the fish screen at the diversions on Deep Creek in Adel from four to six inches. The smaller tube was restricting passage of too many large fish in the 1950's. Trout densities were great enough that early settlers were reported to have used pitch forks to harvest them for winter food supplies from upper Twelvemile Creek (A.K. Majors, personal communication). The number and size of trout in these streams no longer matches these historical descriptions.

Wilderness Study Area

Within the amendment area there are 2,460 acres in the Fish Creek Rim WSA (OR-1-117). This entire acreage is recommended for non-wilderness in the BLM's Oregon Wilderness Study Report, October 1991.

Wilderness values in this portion of the WSA are slightly lower as a result of waterholes, fencelines and some trail constructions which lower the natural values of the area from the WSA as whole. Highway 140 has moderate impact on solitude, but as it constitutes an outside sights and sounds element, it does not relate significantly to wilderness values. Overall solitude and primitive and unconfined recreation values in the Sweeney Canyon area are moderate to high as one travels from the south end at Rogers Ranch up into the body of the WSA.

Descriptions of this WSA are included in the Final Oregon Wilderness EIS and the Wilderness Study Report. Sections of this EIS and report cover wilderness values of naturalness and opportunities for solitude or primitive and unconfined types of recreation, special features, diversity in the National Wilderness Preservation System, vegetation, wildlife, watershed, wood products, recreation and local personal income.

Sweeney Canyon is in the southwest quarter of the Fish Creek WSA. The area is a moderately deep canyon incised in basalt flows with vegetation of big sage and juniper overstory less than 30% juniper cover. Grasses are Thurber's needlegrass, Idaho fescue and bluebunch wheatgrass.

Watershed and Air Quality

Watershed conditions are based on ESI data. The following ratings considered soil movement, surface litter, surface rock, plant pedestalling, flow patterns, rills and gullies. Stable soil conditions exist on 2,086 acres, erosion is slight on 9,964 acres, moderate on 618 acres and critical erosions conditions occur on 181 acres. There is no erosion condition data on 465 acres.

Condition trends are up on 5,830 acres, stable on 6,964 acres and down on 55 acres. There is no trend data on 465 acres. Trend was based on consideration of plant vigor, desired plant seedling establishment, surface litter, plant pedestalling and gully development.

There are no established air quality observation stations in the amendment area, however, air quality is generally good. Occasional impacts occur from dust, and smoke from agricultural burning and natural and prescribed wildland fires. Prevailing air flows are from the south-west and air movements are generally good. The Clean Air Act, as amended, directs the State of Oregon to meet or exceed national ambient air quality standards by 1994. The visibility improvement plan of the State Implementation Plan considers the impacts smoke from prescribed fire may have on visibility of Class I areas of designated wilderness areas and National Parks.

Endangered and Threatened Species

The perennial streams in the Twentymile Creek drainage are listed as critical habitat for the Warner Sucker, a federally listed threatened species. In addition, suckers occur in lower Deep Creek. Prior to implementation of any juniper management projects, a consultation with the United States Fish and Wildlife Service under Section 7 of the Endangered Species Act will be conducted. Peregrine Falcons, a federal endangered species, are occasionally seen in the area during the spring and fall waterfowl migrations. Inventories of the Warner Valley (Boyce and White, 1982) found no eyries within the amendment area. In 1989, a cooperative project between the Peregrine Fund, ODF&W and the BLM started the release of peregrines in the Warner Valley in the hope of reestablishing functioning wild populations.

Bald Eagles, a federal threatened species, are observed in Warner Valley in the fall and winter. While no bald eagles are known to have nested in the plan amendment area, three nest sites have been documented in the valley; on Fish Creek Rim, a cliff nest at the mouth of Deep Creek Canyon, and a third atop a beaver lodge in the Honey Creek Marshes.

The following species that may occur in the area are federal candidates for listing as threatened or endangered: California bighorn sheep, pygmy rabbit, spotted bat, western sage grouse, loggerhead shrike, and Warner Valley red-band trout. All the streams in the amendment area provide habitat for the Warner Valley red-band trout.

Assessment Species

The following are Bureau Assessment Species that may occur in the amendment area: Desert horned lizard, northern saw whet owl, Swainson's hawk, Lewis' woodpecker, black-backed woodpecker, white-headed woodpecker, western bluebird and white-tailed jackrabbit. There are no Bureau Sensitive Species in the area.

In addition to the Federal Candidate and Bureau Assessment species listed above, the following species may occur in the area that are listed by the State of California as species of special concern: Bank swallow, golden eagle, and prairie falcon.

Cultural Resources

There are no known cultural sites in the area, although their presence is expected. In addition, there are no known historic sites or sites eligible or nominated for the Historic Register within the planning area.

Recreation

Deep Creek along Highway 140, receives moderate angling use, while less use is made in Deep Creek Canyon above the highway. Angling is light on Twelvemile and Camas Creeks. Some camping use is made along Deep Creek above the highway and on private land above Deep Creek Falls.

Visual Resource Management

Deep Creek Canyon is a class II VRM area associated with the Highway 140 travel corridor (MFP). Management of a Class II VRM area is described in the Lakeview Grazing EIS as: "Changes in any of the basic elements (form, line, color, texture) caused by a management activity should not be evident in the characteristic landscape". Sweeney Canyon is within the same class II corridor. If designated Wilderness, The Fish Creek Rim WSA would be given Class I VRM status.

Grazing Management

Cattle grazing is permitted in the Plan Amendment Area as a part of seven allotments. Acres in the various allotments listed by management type are included in Table 3. Livestock management in riparian pastures is designed to improve or maintain riparian areas to allow proper functioning condition, usually by timing grazing and then removing stock to allow regrowth of riparian vegetation by summers end. The planned riparian pastures should be in place by the end of 1994. The Animal Unit Month (AUM) figures listed in Table 3 are estimates based on a percentage of the pasture within the amendment area. An AUM is the amount of forage a cow and her calf, or equivalent, consumes in one month.
Map 2 shows allotment locations in the plan amendment area.

Livestock are excluded from six miles of Deep Creek, two miles of Camas Creek, and eight miles of Twentymile and Twelvemile Creeks within the amendment area. The purpose of the exclusions is to allow restoration of riparian areas where livestock cannot be accommodated. Livestock are currently managed on two miles of Camas Creek and a quarter mile of Parsnip Creek with the primary objective to improve riparian vegetation. Livestock are excluded from 28 per cent of the amendment area and are managed for riparian improvement, including planned pastures, on 9 per cent of the area.

Changes to grazing systems and operations are proposed through the allotment analysis, interpretation and evaluation process. When an allotment is evaluated, all the information pertaining to that

TABLE III
Livestock Management
Acres and AUMs by Allotment
Within Amendment Area

Allotment Name and Number	Vinyard 0201	Hickey Ind. 0202	O'Keeffe 0203	Lane Plan II 0206	Lane Plan I 0207	Sagehen 0208	Round Mt. 0211	Rahilly-Gravelly 0212	Total Acres
Exclosure	1655	-	-	-	-	-	1821	274	3750
Existing Riparian Pasture	-	282	-	50	-	-	-	-	332
Planned Riparian Pasture	-	302	-	-	-	56	-	560	918
Three Pasture System	4278	753	-	850	200	-	175	890	7146
No BLM In Plan Area	-	-	1168	-	-	-	-	-	1168
Total Acres	5933	1337	1168	900	200	56	1996	1724	13314
AUMs In Plan Area	366	264	0	75	75	23	10	109	Total AUMs 874

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allotment is gathered and evaluated to determine if stated objectives are being met and/or if new objectives need to be set. These evaluations are conducted with the range conservationist responsible for that allotment acting as team leader of the evaluation, with interdisciplinary participation by multi-resource staff specialists, the grazing permittee and affected interests. Once the evaluation is complete, an Allotment Management Plan (AMP) is prepared that contains specific resource objectives for the allotment and sets a grazing management system to meet those objectives.

All of the allotments, except 0203, within the amendment area have AMPs in place. Allotment 0211 was evaluated in 1990, 0212 in 1991 and 0208 in 1992. Allotments 0201 and 0206 will be evaluated in 1993. There are no BLM lands within allotment 0203 that are also within the plan amendment area.

As a part of this plan amendment no changes to the existing grazing program are proposed Therefore, livestock grazing will not be discussed further in this document. As stated before, livestock grazing was a factor in the present juniper situation, and poor grazing practices must be corrected to prevent continuing juniper invasions. The current AMPs and grazing systems were developed and are serving to maintain and/or improve resource conditions in these allotments. Changes to existing grazing systems will be conducted through the evaluation process.

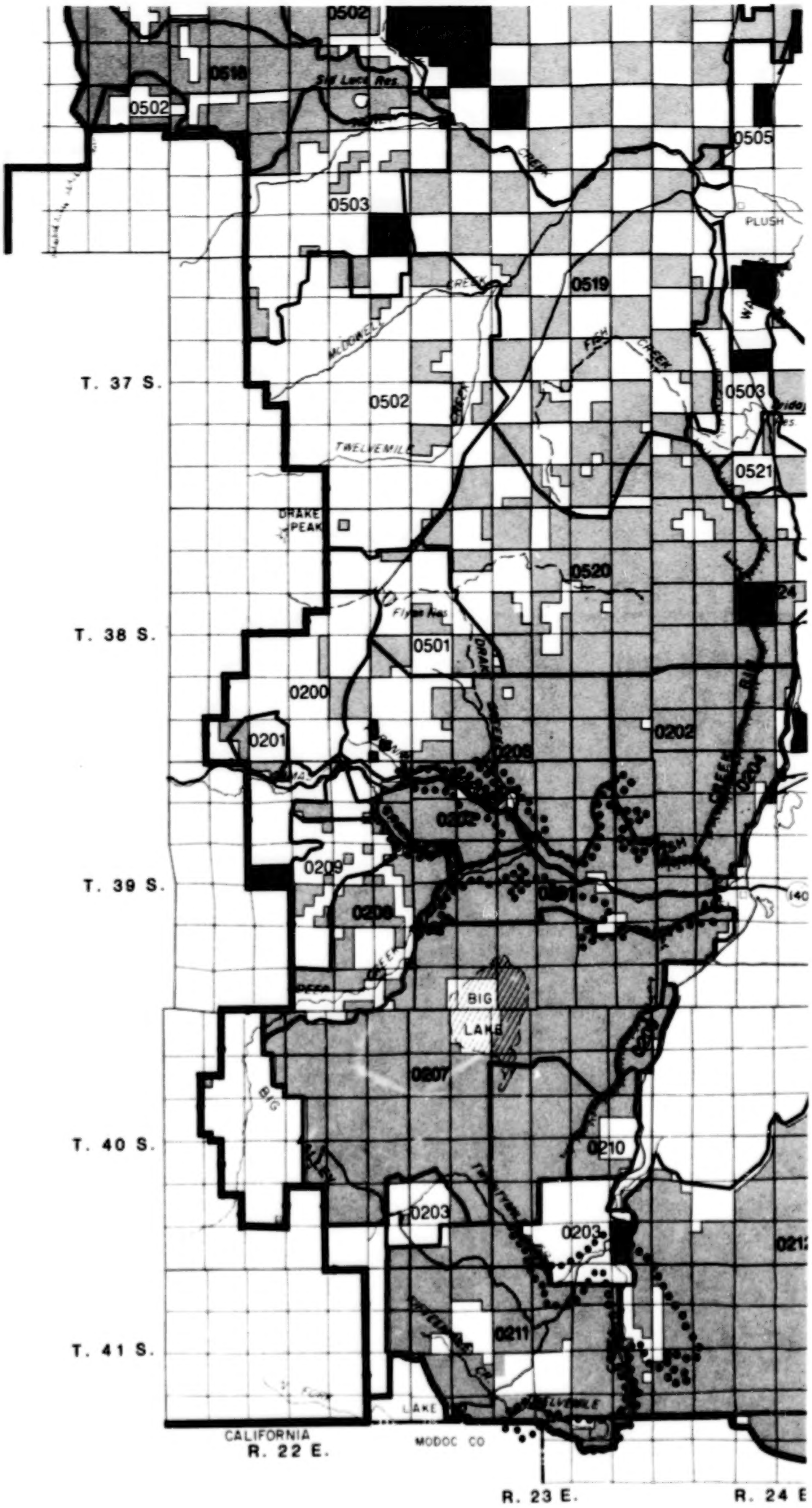
Socioeconomics

The 1988 Lake County population was 7,300 about 0.3 percent of Oregon's total. There are two incorporated towns in Lake County: Lakeview (1988 pop. 2,750) and Paisley (1988 pop. 320). The remaining 4,230 residents are spread into the unincorporated areas in the county around small rural centers. Warner Valley has two of these small communities adjacent to the plan amendment area, Plush and Adel. Based on the number of registered voters, total Warner Valley population is about 240.

Population in the county declined from 1960 to 1970, but has increased since 1970. The population remains sparsely distributed with a population density of 0.9 persons per square mile. Northern portions of the county around Paisley, Silver Lake, and Fort Rock show the most growth. Lakeview (the county seat) remains the principal trading center in the county. The population of Lakeview has remained relatively stable for the last 20 years.

The county contains about 8,231 square miles, or 5,299,789 acres. Land ownership is about 69.8 percent federal, 23.1 percent private, 4.4 percent State of Oregon, and 2.8 percent local government. Federal land administration within the county is spread among three agencies: 46.0 percent BLM, 19.3 percent U.S. Forest Service, and 4.5 percent U.S. Fish and Wildlife Service.

Employment and earnings in Lake County are linked with government, timber manufacturing, agriculture and the retail trades. The primary sectors of the local (County) economy which potentially could be affected by the proposed action or alternatives are the farm (agricultural) and forest businesses in Lakeview and the Warner Valley. Average personal income in Lake County is about $12,400, slightly under the average for Oregon.



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U.S. DEPARTMENT OF THE INTERIOR
Bureau of Land Management

LAKEVIEW DISTRICT
1993

WARNER LAKES MFPA FOR JUNIPER MANAGEMENT

MAP 2

5 0 5
MILES

LEGEND

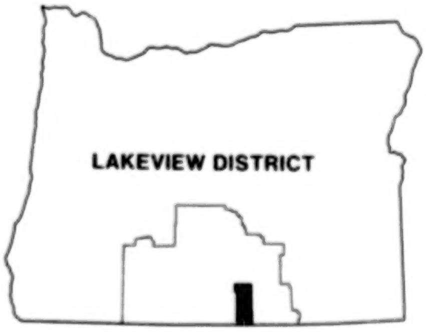
▨ BLM

■ State

☐ Private

•••••• Project Area Boundary

—— Allotment Boundaries



Chapter 4 Environmental Consequences

The following additional resources will not be adversely impacted: Prime and unique farmlands, wild or scenic rivers, Areas of Critical Environmental Concern or paleontological resources. The following resources are discussed in the body of this EA: Threatened and endangered plants and animals, floodplains and wetlands, wilderness, visual, water, cultural and historic and air quality.

Impacts to Vegetation

Alternative No. 1: No Action, Maintain Present Situation

Over the short term the impacts to vegetation would be negligible, but as juniper continues to expand, ecological condition would decline. As existing junipers in aspen stands grow and expand, further decline in aspen would occur and eventually the stands would be lost. Those species that require shade to grow would have a short term increase, however, even those species would decline as juniper density increases and out-competes them for available resources.

Alternative No. 2: Juniper Management to Meet Watershed, Wildlife and Riparian Objectives Excluding the WSA

Juniper would be removed from large areas excluding the Fish Creek Rim WSA. Ancient junipers would remain and pockets of juniper would be left to meet wildlife cover objectives. Generally, grasses and forbs would increase in density and diversity in the project areas. Those species that require dense shade to grow would likely decline. Aspen in particular would be released from competition with juniper and would expand in range and increase in vigor.

Botanical clearances would be conducted prior to site-specific juniper control. Management recommendations designed to avoid or mitigate affects would be made by the area botanist if any special status plants are found. The Area Manager will consider and implement the recommendations deemed necessary.

The effects in the Fish Creek Rim WSA would be the same as Alternative 1.

To place the proposed interpretive site, little new ground would be cleared of vegetation. A site-specific botanical inventory will assure that special status plants are not impacted.

Alternative No. 3: Proposed Action

The effects would be the same as Alternative 2 with the WSA affected similarly to the rest of the plan amendment area. Large blocks of juniper would be left after prescribed fire.

Impacts to Wildlife Habitat

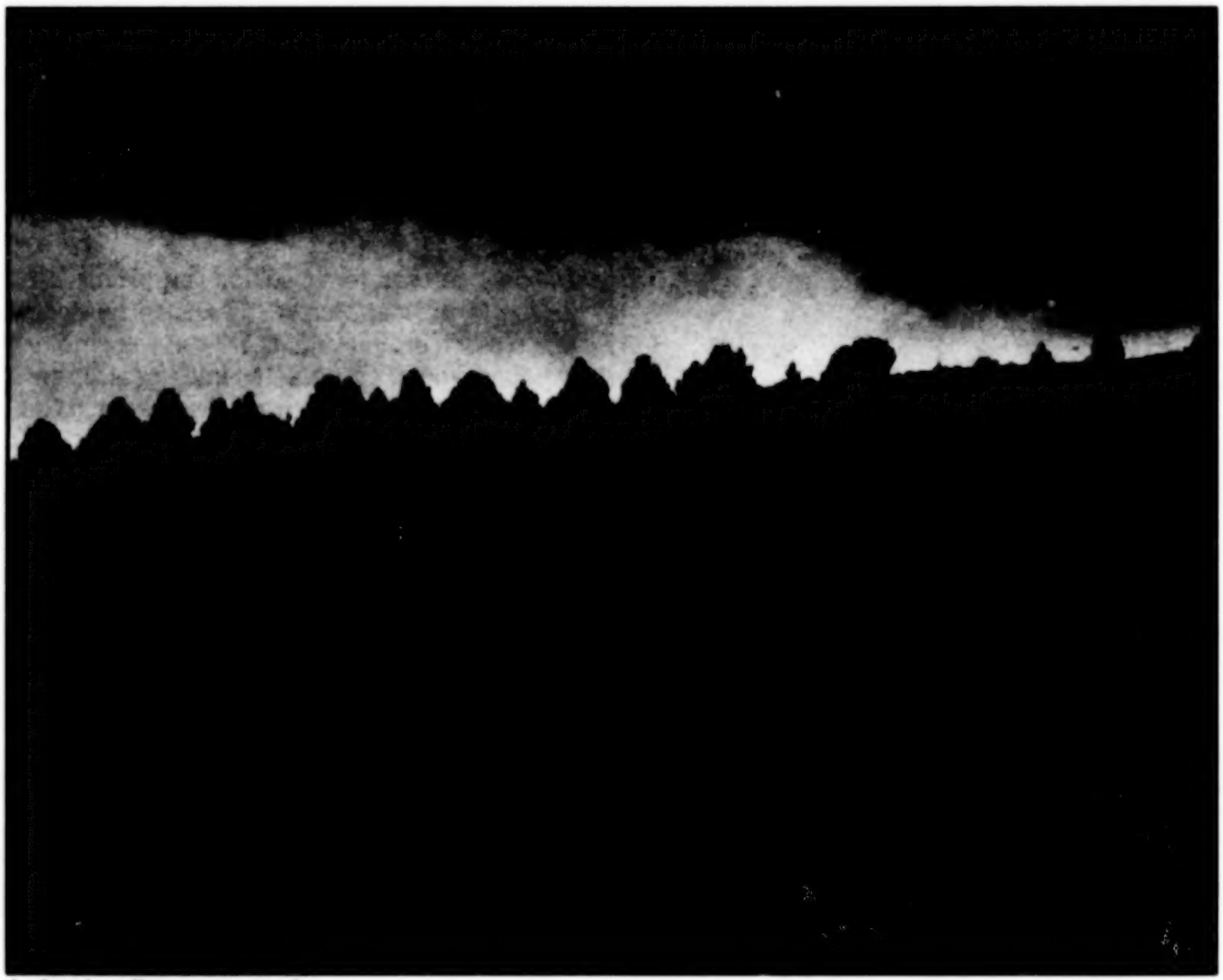
Alternative No. 1: No Action, Maintain Present Situation

Forage for large grazing animals, deer, elk and big horn sheep, would decrease over time. Thermal and hiding cover for these species would increase. Habitat for some passerine birds and wood rats would increase. Cavity dependent species would decline over the short term as decadent aspen falls and is not replaced. Over the long term, 100 plus years, more cavities would be available in juniper. Those species dependent on a diversity of forbs and grasses would decrease in numbers and diversity.

Alternative No. 2: Juniper Management to Meet Watershed, Wildlife and Riparian Objectives Excluding the WSA

Forage quality and quantity would improve for large grazers. Thermal and hiding cover for these species would decline somewhat. However, cover loss would be minimized by designing the juniper control areas to leave the best and most strategically placed cover areas where needed to meet cover objectives. Cover would improve for ground nesting birds and small mammals. Cavity dependent species would not be impacted because of the protection of ancient juniper stands and the increase in aspen.

Effects in the WSA would be the similar to Alternative 1.



Juniper invading aspen stand

The following table, taken from Elmore 1992, shows the number of species that would be positively (+) or negatively (-) impacted by conversion from various juniper communities to grass or shrub grass communities. Information in this table does not consider stand conditions or under story conditions, nor does it consider the extensiveness of any one community compared to surrounding areas. Also, this information does not consider project layout or size.

Table IV. Species Affected By Juniper Control

		Number of Species Affected		
Conversion From	***To***	***+***	***-***	***Total***
Juniper-Grass	*Bunch-grass*	*60*	*47*	*107*
Juniper-Bitterbrush	*Bunch-grass*	*52*	*75*	*127*
Juniper-Tall sage	*Bunch-grass*	*40*	*96*	*136*
Juniper-Short sage	*Bunch-grass*	*61*	*59*	*120*
Juniper-Tall sage	*Tall sage-grass*	*32*	*62*	*94*
Juniper-Short sage	*Short sage-grass*	*20*	*61*	*81*
Juniper-Bitterbrush	*Other Brush*	*46*	*66*	*112*

Alternative No. 3: Proposed Action

Effects would be the same as Alternative 2, including the WSA.

Impacts to Wilderness Study Area

Alternative 1: No Action, Maintain Present Situation

As juniper densities increase, erosion would increase in the WSA. Some of the springs may stop flowing. These changes would result in declining ecological condition.

Alternative 2: Juniper Management to Meet Watershed, Wildlife and Riparian Objectives Excluding the WSA

Juniper removal from lower Deep Creek would be visible from the WSA. After five to ten years, the evidence of the cutting should be negligible. The areas along the creek would be masked by the numerous pines mixed with the juniper. While cutting is occurring, short term saw noise would impact solitude in the near-by areas of the WSA, but the disturbance would be minimal over the background highway noise.

Other impacts in the WSA would be the same as Alternative 1.

Alternative 3: Proposed Action

There would be a major visual change in the project areas as juniper is replaced with herbaceous plants and shrubs.

The long term and overall impact would be an enhanced ecological condition with the restoration of natural process in the area and return to natural vegetation cycle. Reintroduction of fire through prescribed burning or natural ignition fires would also compliment this restoration effort. In the past, natural fire tended to occur on the vegetative sites typical of the WSA in the amendment area every 30 to 50 years (Kaufman 1989). Natural condition of the area and overall wilderness values would improve as a result of the proposed action.

Use of fire to control heavy stands of juniper has not been effective. There is usually inadequate fine fuel to carry a fire under dense stands. *Burns would tend to be small, with larger unburned areas being dominant.*

Impacts to Watershed, Air Quality, Streams and Fisheries

Alternative No. 1: No Action, Maintain Present Situation

Watershed conditions would continue to decline as grass and forb cover is reduced. Accelerated surface erosion on steep canyon slopes would maintain high sediment input and increase turbidity in streams. In addition, degradation of riparian habitat would result in increased water temperature and decreased late season flows.

Due to decreasing ground cover, more sediment would be added to the streams and flood magnitude would increase. Water turbidity and temperature would increase. As juniper density increases, excessive evapotranspiration will continue and increase, and the quantity, quality and duration of stream flow will decline.

Fish habitat conditions would decline as spawning gravels are silted in. Stream banks and riparian conditions would continue to degrade reducing the capability of channels to regulate peak flows.

Alternative No. 2: Juniper Management to Meet Watershed, Wildlife and Riparian Objectives Excluding the WSA

As juniper cover is reduced, watershed conditions would improve. Increasing grass and forb cover would bind the soil and reduce erosion. This would result in the capture and storage of water into the soil improving late season stream flows and reducing rapid run off from the watershed.

As ground cover increases, storm runoff would be slowed and erosion would be checked resulting in less sediment added to the streams. Streams that are presently running intermittently, such as those in Gibson Canyon, may become perennial. Spring flows would increase. Aspen growing along the streams would provide better summer shade than juniper thereby decreasing water temperature.

Fish habitats would improve as watershed and riparian conditions improve. While control of juniper on its own would not improve the fish resource to pre 1960 conditions, it would be a move in that direction.

When fire, prescribed or natural, is used to manage juniper, air quality would decline in the short term as smoke enters the atmosphere. Smoke management as a part of the prescription will reduce the affect. The impact will last only as long as the fire is burning.

The WSA would be impacted the same as Alternative 1.

Alternative 3: Proposed Action

Effects to the watershed, streams and fisheries under this alternative would be similar to Alternative 2, including the WSA. However, use of prescribed fire only would not be as effective at controlling juniper as cutting. Large blocks of juniper may be left after burning. The stream in Sweeney Canyon would flow longer into the season improving wildlife and scenic values. Erosion would be reduced as ground cover increases, however, a short term increase in erosion is expected after the fire until ground cover establishes.

Impacts to Endangered and Threatened Species

Alternative No. 1: No Action, Maintain Present Situation

Spawning habitats for the Warner Sucker and Warner Valley red band trout would decline in condition as they are further silted in from erosion runoff in the canyons. As riparian areas continue to decline, stream banks would collapse, creating wider more shallow streams and increased summer water temperatures. Hiding cover would be reduced.

Currently, bighorn sheep use in the amendment area is minimal. However, forage in the area would decline.

Other listed and candidate species would not be affected by no action.

Alternative No. 2: Juniper Management to Meet Watershed, Wildlife and Riparian Objectives Excluding the WSA

In the short term, shade would be marginally reduced over the streams, but as riparian conditions improve, other trees such as cottonwood, dogwood, alder, aspen and willow would establish and provide more shade to the streams. Juniper provides minimal shading to the affected streams because of juniper height and the width of the affected streams. Summer water temperatures would drop and banks would build providing better habitat for trout and suckers. Improving watershed conditions would reduce sediment loads into the streams permitting development of better spawning areas.

There are no known current or historic nest sites for bald eagles or peregrine falcons in the area. Peregrines forage primarily for waterfowl in the lower valley and eagles use the area in the winter, when carrion is the primary food source. This alternative will have no affect on these species.

Forage will improve for bighorn sheep. Thermal and hiding cover would be maintained, but at a lower level, by delineating areas for this purpose.

Because of terrain and soils use of the area by pygmy rabbits and western sage grouse is minimal to the point that the alternative will have no affect on these species. Loggerhead shrikes prefer more open country for foraging and nest in trees and shrubs so this alternative will have a beneficial affect on this species.

Bats use the trees targeted for removal only for temporary roost sites, not communal roosts or nurseries. Protecting ancient juniper will result in no affect of this action on bats.

There are no known nest sites for golden eagles and prairie falcons in the California portion of the amendment area, and the juniper control activity will have no effect on these species out-side of nest disturbance. Also, juniper control activities will have no effect on any bank swallows in the project areas.

Alternative No. 3: Proposed Action

The same as Alternative 2, but in the long term even less silt would be added from Sweeney Canyon and the WSA.

Impacts to Assessment Species

All Alternatives

No impacts to Bureau Assessment Species are anticipated. As described in the Wildlife section above, cavity nesters are not likely to be affected in the long term because of protection of ancient juniper and the expected increase in aspen. Other Bureau Assessment Species are not known to be juniper dependent.

Impacts to Cultural Resources

Alternative No. 1: No Action, Maintain Present Situation

Increased erosion may expose sites and move cultural material, decreasing the scientific value of the site. Exposed sites are more vulnerable to illegal artifact collection.

Alternatives 2 and 3: Juniper Management to Meet Watershed, Wildlife and Riparian Objectives Excluding the WSA, and Proposed Action

There would be no change in impacts under this alternative. Juniper management work would generally be accomplished with hand tools and burning so no severe ground disturbance should occur. If equipment that may disturb cultural sites is used to control juniper, the project area would be cleared to assure no cultural sites are present and that they would be avoided prior to equipment use.

Impacts to Recreation

Alternative No. 1: No Action, Maintain Present Situation

Since desirability of a site for recreation use is tied to ground conditions, especially near streams, as site conditions deteriorate with increased juniper cover, recreation use would decline. Much of the recreation use on this area is associated with angling. As fish numbers decline so would recreation use.

Alternatives 2 and 3: Juniper Management to Meet Watershed, Wildlife and Riparian Objectives Excluding the WSA, and Proposed Action

As a part of the recreation program, an interpretive site is planned near Deep Creek to explain why juniper was cut on the plan amendment area. Development of this site would increase public understanding of the project.

For the reasons mentioned in Alternative 1, concerning recreation ties to site conditions and fish habitat, the desirability of the area for recreation use would increase.

Impacts to Visual Resources

Alternative No. 1: No Action, Maintain Present Situation

There would be little change in visual resources under this alternative in the short term. In the long term juniper cover would increase, causing increased erosion and declining site conditions. This would eventually decrease visual quality of the site. A more uniform texture and color would prevail.

Alternatives 2 and 3: Juniper Management To Meet Watershed, Wildlife and Riparian Objectives Excluding the WSA, and Proposed Action

Deep Creek Canyon would be impacted in the short term from the visual resources standpoint with downed heavy fuels and branches. Fire introduction into the system would shorten the lifespan of this impact and should prescribed fire remove the majority of heavy fuels, it would also mask the visual impact as the downed wood would appear to the average viewer from Highway 140 as part of a natural process.

Visual impacts on the slopes would also be subservient to the color contrast along the stream with aspen, pine and other growth in association with the water feature that would draw the eye of the viewer. The upper slope contrast would, by scale, be reduced by a uniform color form and texture to a less dominant feature in the landscape than the current juniper effect of form, color and texture. The more diverse vegetative mosaic resulting from the planned level of juniper removal would add visual diversity to the area.

Impacts to Socioeconomics

Alternative No. 1: No Action, Maintain Present Situation

Under this alternative, general eco-site conditions would decline resulting in the need to reduce livestock numbers to help maintain site conditions on those portions of the seven allotments proposed for juniper management. The level of reduction would depend on the degree of decline of site condition based on the reduction of forage. Any reduction in AUMs would decrease income to the county. As fish numbers decrease, angling use would also decline. Recreation use of the areas would decrease as the general conditions on the sites deteriorate.

Alternatives 2 and 3: Juniper Management To Meet Watershed, Wildlife and Riparian Objectives Excluding the WSA, and Proposed Action

Dollars generated by the payment of labor for control actions would benefit the local communities. If a market is available for the juniper wood product, and if it can be removed without resource damage, it would be sold to further raise revenues in the local communities. Better site conditions and fish habitat would make the areas more attractive to recreationists bringing funds to the communities. The improved late season flows resulting from better watershed conditions and reduced silt loads would benefit downstream irrigators. More water and better water quality would be available for fish habitat.

Chapter 5:
List of Preparers

Name	Primary Responsibility	Discipline
Alan Munhall	Team Leader, Wildlife, Watershed	Wildlife Biologist
Steve Beverlin	Range, Vegetation	Range Conservationist
Ginger King	Sensitive Plants, Vegetation	Botanist
Doug Troutman	Wilderness, Visual, Recreation	Recreation/Wilderness Specialist
Robert Bolton	Review	Program Lead, NRS (Natural Resource Specialist)
Larry Frazier	Review	Program Lead, NRS
Dick Mayberry	Review	Supervisory Range Conservationist
Robert Lund	Review	Supervisory NRS
Paul Whitman	Review	Planning and Environmental Coordinator

Chapter 6 List of Agencies, Organizations and Persons to Whom Copies of This Document Are Sent

Local news Media
Local, State, and National Public Representatives
Wilderness Interest Groups
Environmental Interest Groups
Wildlife Interest Groups
Recreation Interest Groups
Grazing Permittees in the South Warner Planning Unit
Oregon Watershed Improvement Coalition
Oregon Cattlemen's Association
Native Plant Society of Oregon

Governmental Agencies
Oregon Division of State Lands
Lake County Planning Department
Oregon Department of Fish and Wildlife
U.S. Fish and Wildlife Service
Environmental Protection Agency
U.S. Fish and Wildlife Service, Endangered Species Branch, Oregon

Groups Formally Contacted
Oregon Natural Resources Council
Lakeview BLM District Advisory Council
Forest Conservation Council

In addition, this document will be available for public inspection at all BLM offices in Oregon. It will also be sent to the Lake County Library in Lakeview, Oregon, and the Klamath County Library in Klamath Falls, Oregon.

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COMMENT LETTERS - RESPONSE BY GENERAL COMMENT GROUP

Analysis of letters was completed after the close of the comment period. Each letter was reviewed and specific comments were highlighted. The general point of the comment was listed and similar comments from different letters or within the same letter, were combined. The following lists the comment and the BLM response. Where a change was made to the draft, the page of the document where the change was made is listed. Additions to the draft made as a result of comments received are made in *italics*.

1. **Comment:** Prepare an EIS (Environmental Impact Statement)

   Response: An RMP and associated EIS are not planned to be completed in the near future. Degraded watershed conditions due to domination by juniper are creating water quality and erosion problems that can be solved and stopped almost immediately by juniper control. Because of soil loss, site productivity and recovery potential are declining. Therefore a plan amendment that will allow more immediate action is preferred over waiting for the completion of an RMP at some date in the future. The use of plan amendments is authorized by 43 CFR 1610.5-3 and 1610.8 (a)(3)(ii).

   The Finding of No Significant Impact based on the attached environmental assessment has concluded that there are no significant impacts on the human environment and therefore no EIS is required, as stated in the National Environmental Policy Act of 1969. The use of Environmental Assessments in conjunction with plan amendments is authorized by BLM Planning Manual 1617.42 A.

2. **Comment:** Prepare a Biological Assessment

   Response: A Biological Evaluation (Biological Assessments are prepared on major federal actions) will be prepared based on the actions outlined in the decision record. The Lakeview Resource Area is currently in the process of consulting with the U.S. Fish and Wildlife Service on a watershed level analysis of impacts on Warner suckers. The consultation will include grazing and proposed juniper management. To date, we have held informal discussions and conducted on-site tours with the Fish and Wildlife Service in this area. On-the-ground actions will not be initiated until evaluations and formal or informal consultations, if required, are completed.

3. **Comment:** Juniper control is proposed only to increase livestock forage.

   Response: The driving force behind the plan amendment and juniper management on the Lakeview Resource Area is to improve watershed conditions. The plan amendment, as proposed, would not authorize any permanent increase in forage allocations to livestock as a result of increased grass and forb growth resulting from juniper control. For this reason the number of AUMs (Animal Unit Months) that would be potentially produced by this project was not estimated. The increased plant cover would be used primarily by wildlife and as increased soil holding ground cover.

4. **Comment:** Complete allotment evaluations and Allotment Management Plans (AMPs) on all the Districts Allotments prior to project implementation.

   Response: This comment is outside the geographic scope and procedural purpose of the subject plan amendment as it deals with areas outside of the amendment area.

   As noted in Table 3 of the Plan Amendment, livestock grazing in all allotments that contain BLM lands in the amendment area is managed under a rotation system that incorporates some years of rest and deferment of grazing. While this system alone does not specifically meet the needs for improvement of riparian areas and aspen stands, it is an effective management method for general upland watershed improvement. This system meets the growth requirements of grasses and forbs which improve ground cover.

   Allotments 0202, 0208, 0211 and 0212 have been evaluated. Allotments 0201, 0206, and 0207 are scheduled for evaluation in 1994. Grazing effects on other resources such as recreation, cultural and visual will be considered in the evaluations.

5. **Comment:** How is existing grazing impacting riparian areas and aspen stands?

   Response: Riparian areas and aspen stands are generally being managed either by exclusion of livestock or by livestock management to meet the specific needs of riparian areas (See Table 3). All of the perennial streams under BLM management in the Twentymile Creek drainage within the amendment area are excluded from grazing. The intermittent stream in this drainage is excluded on a portion and the remainder is in a riparian pasture. In the Deep Creek drainage all but 3.5 miles of perennial streams are or will be either excluded from grazing or are in a riparian pasture. The remaining portions of perennial streams are in steep rocky canyons, such as Deep Creek below the falls, that receive little livestock use. The intermittent streams in the Deep Creek drainage are in generally poor condition due to livestock management practices and juniper encroachment. The majority of aspen stands in the amendment area occur within the excluded areas or in the riparian pastures and livestock use in the area should not be a factor to their condition or trend.

6. **Comment:** Why was Allotment 0203 (O'Keeffe) included if 0 AUMs occur in the planning area?

   Response: The number of AUMs in an allotment has no tie to the need for juniper control to improve watershed conditions. The inclusion of private lands within the amendment boundary was done to facilitate map layout. The BLM will do no juniper work on private lands using public funds. Allotment 0203, in association with the amendment area contains a total of 3,400 acres, including 65 acres of public lands. Allotment 0203 is a Federal Range Fenced allotment where livestock are managed at the discretion of the permittee without direction of the BLM, including Allotment Management Plans, as long as damage to federal lands does not occur. This type of management is allowed on areas that are primarily private land. There are no BLM lands in this allotment that are also in the amendment area.

7. **Comment:** How effective are the exclosures in controlling livestock?

   Response: The exclosures on the streams in the amendment area have been variably successful at eliminating livestock use. The exclosures on streams in the Deep Creek drainage have been very successful. The Twentymile exclosure has had poorer success over the years, but this last year, with improved fencing and closer supervision, the exclosure was effective.

8. **Comment:** Develop an alternative to reduce or eliminate livestock use. If grazing was not occurring, juniper control would not be needed to improve watershed conditions.

   Response: Without juniper control the sites with degraded watershed condition, resulting from increased juniper cover, will not improve, with or without livestock use. The juniper cover on these sites is degrading the site potential by allowing increased soil loss. Proper livestock management on these sites encourage the growth of watershed stabilizing plant cover and allow recovery of these systems. Adjustments in grazing levels and changes in season of use will be completed as needed to assure improvement of range and watershed conditions through the allotment evaluation process. There is nothing in the current MFP that would prohibit the changes in livestock use needed to improve watershed or riparian conditions, therefore a plan amendment for this type of action is not necessary. Prior to, and for a period of at least two growing seasons after a prescribed fire, the affected area will be rested.

   A no grazing alternative, Alternative 2-Eliminate Livestock Grazing, was evaluated in the Lakeview Grazing EIS and subsequent Rangeland Program Record of Decision. Further evaluation was not warranted by this amendment as livestock grazing levels are not a germane issue.

9. **Comment:** To separate livestock created problems from those watershed problems created by juniper, show range condition on a map.

   Response: This information is available in the office and can be made available for public review, but the map scale is too large to make reproduction feasible. In any case, current eco-site condition is a result of many factors, not just current and past livestock grazing practices. Eco-site condition is a function of the existing plant composition compared to the potential natural community of the site. Generally, those sites with heavier juniper cover than potential, as outlined on pages 10 and 11 of the amendment, have plant compositions further from site potential and are therefore in poorer condition. The sites with the heaviest cover of invasive juniper will be the sites where juniper will be controlled.

10. **Comment:** What constitutes improved riparian condition, and what will benefit from improved conditions?

    Response: Riparian areas in good condition benefit nearly all resources, including grazing, water quality, most wildlife, fisheries, etc.. Forage conditions for livestock and wildlife are better on good condition riparian areas. We view a riparian area as improving when stream banks are stabilizing, stream shade and water quality is improving, especially decreases in water temperature. Generally, improvement in willows and other woody riparian vegetation is a factor in achieving the above goals. Riparian areas in good condition tend to have a larger diversity of species, both aquatic and terrestrial, than areas in poor condition.

11. **Comment:** What ties are there between implementation of grazing management and funding?

    Response: Existing livestock management facilities meet the needs of the current operational plans in the amendment area. There is no proposal to reduce the level of AUMs in the area if funding for juniper control funds do not become available. If the evaluation process indicates the need to reduce AUMs or change the current livestock management, it will be done independently of funding for juniper management.

12. **Comment:** The Plan was not specific enough to allow analysis.

    Response: The plan allows for future changes in management as new information and methodologies become available. The proposed amendment includes more specific guidance on what type of juniper control, especially mechanical, including yarding, and firewood sales, will be allowed based on site characteristics and conditions (Page 8). In addition more specific requirements for coordination with ODF&W for each project is outlined (Page 8).

13. **Comment:** Old-growth juniper management plans need to be more specific, not just protection elements listed.

    Response: The proposed amendment is more specific on the management of old-growth juniper (Page 9).

    Where prescribed fire is used to control juniper, the ability to protect older trees, especially individuals outside of stands, is limited and more old trees may be killed. However, the old trees are generally located in areas where fire could not enter in the past, such as rim rock and barren areas, so fire should not impact the majority of the old trees.

    We do not have an inventory of juniper sites on the district based on age and growth characteristics. We have only started controlling juniper and have not impacted old growth stands. Juniper control projects in the rest of the resource area now contain protection requirements for old growth juniper.

14. **Comment:** Prepare prescribed fire plans now.

    Response: Prescribed fire plans are site-specific and may change over time to allow for specific changes to the site that affect fire behavior. A site specific burn plan will be prepared for each portion of the area where prescribed fire is planned to be utilized.

15. **Comment:** Project work will occur prior to clearances being completed and monitoring established.

    Response: Prior to any surface disturbing activity, the staff botanist, biologists and archeologist will review the project and outline measures required to assure no negative impact to their respective resources. Their recommendations will be incorporated into the specific project plan.

16. **Comment:** How is the plan tied to commodity interests?

    Response: The need for juniper management in the amendment area is based on watershed improvement needs, not on the desire to improve livestock forage nor to provide wood products. As grass and forb cover improves, more livestock forage will be available, but there is no plan amendment proposal to increase forage allocations to livestock. If there is an increase in forage production as a result of juniper control, overall livestock utilization of key forage species will decline over the entire affected pasture. The proposal to use some level of commercial or firewood harvest to manage juniper (no more than 20 acres per year) is to reduce the cost of juniper control. The need for juniper control is independent of the need to provide wood products.

17. **Comment:** What other factors are affecting water quantity?

Response: Above the BLM reaches on Deep, Camas, Drake, Parsnip, and Twelvemile Creeks, these streams are diverted for irrigation of meadow pastures. This practice by far has the greatest impact to water quantity. The BLM has no control over this water withdrawal and these irrigation practices in these areas. Current livestock management practices are having a minor effect on water quantity. The direct consumption of water by stock is minimal.

There is some impact to late season water flows caused by livestock consumption of upland forage. When ground cover is reduced, as by grazing, less spring runoff water will be held in the uplands for slower release into the system. The runoff tends to increase spring flows at the expense of flows in the summer. This effect has not been measured but it is felt that a more critical factor is the condition of the riparian area associated with the effected streams and its ability to store the spring flows for later release. Juniper, by reducing ground cover as explained on pages 2 and 3 of the amendment, has a greater effect on late summer flows than does grazing.

18. **Comment:** Concern over juniper management in the Fish Creek Rim Wilderness Study Area (WSA).

Response: The proposed plan now allows prescribed fire with no pre-treatment of fuels as the only method to control juniper in the WSA and only if the objective is to improve wilderness values (Page 10). It must be pointed out however, that without pre-treatment, the use of prescribed fire may not be possible due to lack of ground cover in the area.

19. **Comment:** Concern over size and content of interpretive site.

Response: The proposed amendment recommends location of the site on a smaller area immediately adjacent to the highway. This site will require minimal new disturbance (Page 9 and site location included on map. The content of the interpretive materials will be objective and designed to explain the extent, purpose, timing and intended results of juniper treatment.

20. **Comment:** Concern about noxious weeds and undesirable plants invading juniper control areas.

Response: The greatest risk of introduction of noxious weeds comes from exposing soil to weed seeds without competition. The majority of control activity will involve minimal ground disturbance, such as chainsaw cutting and leaving the slash and tree trunk on site. Sites where juniper is controlled will have better ground cover composed of perennial grasses, forbs and shrubs and will be better able to compete against noxious weed infestations. Other juniper control sites in the area have not exhibited an increase in noxious weeds even though sources of weed seeds were in the vicinity.

Observations of prescribed fire sites has not revealed an increase in noxious weeds over what was present prior to burning.

21. **Comment:** Control only multi-branched juniper to select for genetically superior stock and keep a balance of male and female trees.

Response: There is no scientific literature available to substantiate that juniper growth form is based on genetics. Instead it is believed that growth form is a function of site conditions, where sites with deeper soils and with more moisture available produce the straighter, less branched trees (Rick Miller, Squaw Butte Experiment Station, personal communication). While some trees are strongly male or female, other trees produce both male and female flowers, and the ratio on each tree may vary yearly. There is no concern over the male/female ratio in juniper control projects.

22. **Comment:** Objectives should be quantifiable and set within a time-frame.

Response: For the purposes of this amendment, objectives and goals are stated generally. As site specific management plans and projects are developed, objectives that are quantifiable and time specific will be set.

23. **Comment:** Table 1 should provide information on potential riparian communities

Response: The data in the table showing potential vegetation communities came from an Eco-site Inventory conducted from 1986 to 1988. Riparian communities in the amendment area were smaller then the designated mapping units and were included in associated upland sites. Also, there are no community descriptions for riparian sites in this area.

24. **Comment:** Include the species listed by the State of California as threatened, endangered or species of special concern which may be affected by the project in California.

Response: In addition to the Oregon species discussed in the amendment, California listed species that may occur in the amendment area include bank swallows, golden eagles and prairie falcons. These species have been included in the proposed plan (Page 15). The proposed plan also considers plants listed in the California Special Plant Elements for botanical clearance in California (Page 8).

25. **Comment:** The amendment needs to have specific time frames and monitoring techniques for pre and post project treatments to evaluate the effects of the treatments.

Response: The monitoring recommendation is included in the proposed plan (Page 9). Photo points and spring flow monitoring will be required as a minimum for each project. On selected representative areas more extensive vegetation monitoring will occur. Current literature (see Literature Cited section of the amendment) and anecdotal evidence has shown the value to watersheds of control of invasive juniper. Extensive monitoring of each project is not needed to substantiate this point on every project. The proposed amendment contains minimum requirements for monitoring.

26. **Comment:** What have been the results of other Lakeview juniper control projects and how has grazing been managed on these sites?

Response: One of the largest juniper control projects to date was completed in 1992, and it is too early to evaluate the results of this project. With one exception, the other projects have been successful at meeting objectives of stabilizing eroding areas, improving ground cover and releasing riparian vegetation from competition.

The one exception was a small (10 acre) project on Big Juniper Mountain. On this project, the trees were older than expected and the expected results of improved spring flow and vegetation release did not occur.

Grazing has continued as scheduled on our completed, non-burn, juniper control sites. Grazing management has ranged from exclusion, deferred rotation, early spring to three pasture rotation systems. We have observed no apparent effect on upland site recovery under proper livestock management.

Our juniper control projects have left the juniper on site and this has resulted in effectively excluding livestock on much of the control area.

27. **Comment:** There should be a single goal statement that each alternative addresses.

Response: Alternatives can be developed to meet a wide variety of goals. For example, the no action alternative required by NEPA has a different goal than any other alternative. The goals of Alternative 2 and 3 are the same in this case, with different direction for management of juniper in the WSA being the basis for the difference.

28. **Comment:** Additional issue identification.

Response: One issue raised concerned the maintenance or improvement of habitat diversity in age class, distribution and composition of grass, forb, shrub and tree species. This issue is a part of Issue 5 identified in the amendment as a part of watershed condition and grass/forb community management.

To address the second issue raised, Issue 2 in the draft amendment was modified to include not only thermal cover issues, but also big game forage (Page 5).

29. **Comment:** How many species of wildlife are dependent on juniper?

Response: A table has been included in the Environmental Consequences section that shows how many species will be impacted, positively or negatively, by juniper control (Page 20). As noted in the text with this table, the data presented does not consider the size or layout of a given project. Nor does it consider juniper control on areas with little or no understory.

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